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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,154	11/01/1999	TAKEHIRO KATA	104639	8340
25944 7590 01/23/2004 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER MACKEY, JAMES P	
			ART UNIT 1722	PAPER NUMBER

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/431,154	Applicant(s) KATA ET AL.	
Examiner James Mackey	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-648)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s) 20040113
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain Patent 1,248,891 (Figures 1-5) in view of Miyata et al. (U.S. Patent 5,208,044) and further in view of any one of Materick (U.S. Patent 3,806,288), Le Moullac (U.S. Patent 3,990,823), Le Moullac (U.S. Patent 4,289,463), Nara et al. (U.S. Patent 6,066,283) and Allitt (U.S. Patent 3,553,789).

British '891 discloses a vulcanizing mold substantially as claimed, comprising upper and lower sidewall mold members integrally attached to upper and lower base plates, upper 42 and lower 10 tread mold members indirectly attached to the upper and lower base plates and being constituted of upper segments and lower segments, respectively, the upper and lower segments being displaceable only radially relative to the upper and lower sidewall mold members, a single cam ring 43 in direct engagement with the upper and lower tread mold members (see especially

Figs. 4 and 5, showing that the cam ring engages with a tapered portion of the lower segments 11), the cam ring being always in engagement with the upper segments, the cam ring being adapted to be displaced independently of approaching displacements of the sidewall mold members toward each other (see especially page 2, lines 50-53, 70-73 and 93-100; page 4, lines 29-32; and page 5, lines 44+) to thereby simultaneously displace the upper and lower segments radially inwards while the upper and lower segments are in abutment with each other and while the cam ring remains in direct engagement with the upper tread mold member and in indirect engagement (via cooperating projection 81 and recess 34) with the lower tread mold member, and abutments means 79, 80 on the upper base plate and the cam ring for defining the upper limit position of the cam ring relative to the upper base plate. British '891 also discloses a method of vulcanizing a tire substantially as claimed using such a mold, the method comprising displacing the upper and lower sidewall mold members toward each other so that the upper and lower segments are brought into abutment with each other, and operating the cam ring while the cam ring remains in direct engagement with the upper tread mold member and in indirect engagement (via cooperating projection 81 and recess 34) with the lower tread mold member to simultaneously displace all of the segments radially inwards relative to the upper and lower sidewall members, with the upper segments in abutment with the lower segments.

British '891 does not disclose that the cam ring simultaneously displaces all of the segments radially inwardly while the cam ring remains in direct engagement with both upper and lower tread mold members. Miyata et al. disclose a tire vulcanizing mold and method, wherein a single cam ring 4 (formed of two connected parts 4a and 4b) simultaneously displaces all of the tread mold segments radially inwardly (independently of approaching displacements of the

sidewall mold members toward each other, see col. 8, lines 10-22) while the cam ring remains in direct engagement with both the upper tread mold members and the lower tread mold members. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify British '891 by providing the cam ring in direct engagement with both the upper and lower tread mold members to simultaneously displace the segments radially inwardly, as disclosed in Miyata et al., since such an arrangement would enable a more reliable radially inward movement of the lower tread mold member by applying a force from the outward side of the lower tread mold member rather than from the upper side thereof, and since such an arrangement is equivalent to the direct engagement of the cam ring with the upper tread mold member and the indirect engagement of the cam ring (via cooperating elements 81 and 34) with the lower tread mold member, as disclosed in British '891.

British '891 does not disclose a spring that urges the lower tread mold segments radially outwards. Each of Materick, Le Moullac '823, Le Moullac '463, Nara et al. and Allitt discloses a tire vulcanizing mold and method, including a cam ring which simultaneously displaces all of the tread mold segments radially inwardly, wherein a spring urges the tread mold segments radially outwards during opening of the mold. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify British '891 by providing a spring that urges the lower tread mold segments radially outwards, as suggested by any one of Materick, Le Moullac '823, Le Moullac '463, Nara et al. and Allitt, in order to assist in the opening movement of the tread mold segments and to assure that the tread mold segments move outwardly a distance sufficient to become free of the tread of the vulcanized tire upon mold opening.

3. Applicant's arguments filed 17 December 2003 have been fully considered but they are not persuasive.

Applicant argues that Miyata et al. do not disclose the use of a "single cam ring" as claimed; however, the examiner contends that Miyata et al. do disclose a single cam ring ("actuator" 4). Miyata et al. further disclose that this single member is divided into upper and lower portions 4a, 4b which are provided with means for releasably connecting the portions together during mold closing when the connected cam ring portions simultaneously move the upper and lower tread mold segments radially inwardly (see, e.g., Miyata et al. at col. 3, lines 45-57); the connected cam ring portions are considered to be a "single" cam ring as claimed, giving the term "single" its broadest reasonable interpretation.

Furthermore, British '891 clearly teaches a single cam ring engaging with the upper and lower tread mold segments for simultaneously moving the tread mold segments radially inwardly, and it would have been obvious to a skilled artisan to modify the teachings of British '891 by providing the single cam ring in direct engagement with both the upper and lower tread mold segments to simultaneously move the upper and lower tread mold segments radially inwardly in view of the disclosure of Miyata et al. of a cam ring member (comprised of connected upper and lower portions) in direct engagement with both the upper and lower tread mold segments to simultaneously move the upper and lower tread mold segments radially inwardly.

It is noted that independent claim 6 does not require that the cam ring be a "single cam ring"; therefore, Applicants' arguments are not commensurate with the scope of claim 6.


4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.


James Mackey
Primary Examiner
Art Unit 1722

1/14/04

jpm
January 14, 2004